

WHAT IS CLAIMED IS:

1. An information processing method for converting input color data indicating a plurality of color components including a black color component into output color data that indicates a plurality of color components including a black color component, said information processing method comprising:

determining a relationship between lightness levels and black color based on characteristics of an output device;
and

determining, when the input color data indicates a simple black color, output color data for a simple black color having a lightness level equivalent to a lightness level of the input color data, based on the determined relationship between lightness levels and black color.

2. An information processing method according to claim 1,

wherein the input color data is converted into the output color data via a device-independent color space by using a source profile and a destination profile;

wherein the relationship between lightness levels and black color is determined by using the destination profile;
and

wherein when the input color data indicates a simple black color, lightness information is determined by converting the input color data into color data represented by the device-dependent color space by using the source profile, and the output color data for a simple black color is determined from the lightness information by using the relationship between lightness levels and black color.

3. An information processing method according to claim 1, wherein the input data and the output data are either simple black colors or achromatic.

4. An information processing method for converting input color data into output color data that indicates a plurality of color components including a black color component, said information processing method comprising:
determining a relationship between lightness levels and black color based on characteristics of an output device;
and

determining, when the input color data indicates an achromatic color, output color data for black color having a lightness level equivalent to a lightness level of the input color data based on the relationship between lightness levels and black color.

5. An information processing method according to claim 4, wherein the input color data is formed of a red color component, a green color component, and a blue color component, and, when the red color component, the green color component, and the blue color component are equal to each other, the input color data is determined to be an achromatic color.

6. A program for implementing an information processing method for converting input color data indicating a plurality of color components including a black color component into output color data that indicates a plurality of color components including a black color component, said program implementing:

determining a relationship between lightness levels and black color based on characteristics of the output device;
and

determining, when the input color data indicates black color, output color data for the black color having a lightness level equivalent to a lightness level of the input color data based on the relationship between lightness levels and black color.

7. A program for implementing an information processing method for converting input color data into

output color data that indicates a plurality of color components including a black color component, said program implementing:

determining a relationship between lightness levels and black color based on characteristics of the output device; and

determining, when the input color data indicates an achromatic color, output color data for black color having a lightness level equivalent to a lightness level of the input color data based on the relationship between lightness levels and black color.

8. An information processing apparatus for converting input color data indicating a plurality of color components including a black color component into output color data that indicates a plurality of color components including a black color component, said information processing apparatus comprising:

a first section arranged to determine a relationship between lightness levels and black color based on characteristics of an output device; and

a second section arranged to determine, when the input color data indicates black color, output color data for black color having a lightness level equivalent to a lightness level of the input color data based on the

relationship between lightness levels and black color.

9. An information processing apparatus for converting input color data into output color data that indicates a plurality of color components including a black color component, said information processing apparatus comprising:

a first section arranged to determine a relationship between lightness levels and black color based on characteristics of an output device; and

a second section arranged to determine, when the input color data indicates an achromatic color, output color data for black color having a lightness level equivalent to a lightness level of the input color data based on the relationship between lightness levels and black color.

10. The information processing apparatus of claim 9 wherein the black color is a simple black color.

11. An information processing method for using characteristics of an output device to convert an input black color into an output black color, said method comprising:

determining a lightness level for the input black color;

establishing a relationship between lightness levels

and black color for the output device; and

generating the output black color by using the lightness level of the input black color and the relationship between lightness levels and black color of the output device.

12. The method of claim 11 wherein the output black color has a lightness level corresponding to the lightness level of the input black color.

13. The method of claim 11 wherein the input black color is a simple black color and the output black color is a simple black.